

comprising a second isolated polynucleotide which encodes *B. anthracis* protective antigen(PA) protein or an immunogenic fragment thereof to the subject, said second polynucleotide being operably linked to a promoter which drives expression of the PA protein or immunogenic fragment thereof.

AI  
W 25. (Once Amended) The nucleic-acid based immunogenic composition of claim 24 wherein the second polynucleotide comprises a sequence comprising consecutively nucleotide 610 through nucleotide 2295 of the sequence set forth in SEQ ID NO. 3, and the first polynucleotide encodes a protein comprising a sequence which is at least 90% identical to a sequence extending from amino acid 9 through amino acid 252 of the sequence set forth in SEQ ID NO. 2.

[Please add the following claims]

Sub B2 31. (New) The nucleic-acid based immunogenic composition of claim 23 wherein the first polynucleotide encodes a polypeptide comprising a sequence which is at least 90% identical to a sequence extending from amino acid 9 through amino acid 252 of the sequence set forth in SEQ ID NO. 2.

A<sup>2</sup> 32. (New) The nucleic-acid based immunogenic composition of claim 23 wherein the first polynucleotide encodes a polypeptide comprising a sequence which is at least 90% identical to a sequence extending from amino acid 42 through amino acid 252 of the sequence set forth in SEQ ID NO. 2.

33. (New) The nucleic-acid based immunogenic composition of claim 23 wherein the first polynucleotide encodes a polypeptide comprising a sequence which is at least 90% identical to a sequence extending from amino acid 34 through amino acid 809 of the sequence set forth in SEQ ID NO. 2.

34. The nucleic-acid based immunogenic composition of claim 23 wherein the first polynucleotide comprises nucleotide 100 through nucleotide 2430 of SEQ ID NO. 1.

35. The nucleic acid based immunogenic composition of claim 23 wherein the first polynucleotide comprises nucleotide 125 through nucleotide 855 of SEQ ID NO. 1.

36. The nucleic acid based immunogenic composition of claim 24 wherein the first polynucleotide encodes a protein comprising amino acid 42 through amino acid 252 of the sequence set forth in SEQ ID NO. 2, and the second polynucleotide encodes a protein comprising a sequence which is at least 90% identical to a sequence extending from amino acid 175 through amino acid 735 of SEQ ID NO. 4.

37. The nucleic acid based immunogenic composition of claim 24 wherein the first polynucleotide encodes a protein comprising amino acid 42 through amino acid 252 of the sequence set forth in SEQ ID NO. 2, and the second polynucleotide comprises nucleotide 88 through nucleotide 2295 of SEQ ID NO. 3.

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38. The nucleic acid based immunogenic composition of claim 24 wherein the first polynucleotide encodes a protein comprising amino acid 42 through amino acid 252 of the sequence set forth in SEQ ID NO. 2 and the second polynucleotide comprises nucleotide 610 through nucleotide 2295 of SEQ ID NO. 3.

39. The nucleic acid based immunogenic composition of claim 23 wherein the first nucleotide encodes a polypeptide comprising amino acid 1 through amino acid 775 of SEQ. ID NO. 2.

40. The nucleic acid based immunogenic composition of claim 24 wherein the first nucleotide encodes a polypeptide comprising amino acid 1 through amino acid 775 of SEQ ID NO. 2.

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41. The nucleic acid based immunogenic composition of claim 23 wherein the first polynucleotide is incorporated into a viral vector.

42. The nucleic acid based immunogenic composition of claim 24 wherein the first